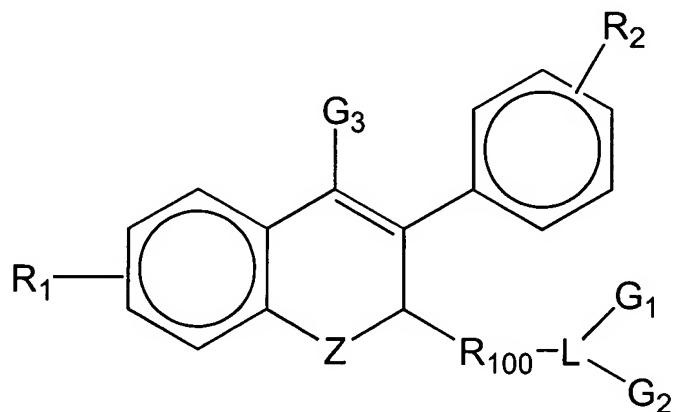


## **LISTING OF THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Currently Amended) A pharmaceutical composition comprising:

- a) a pharmaceutically acceptable excipient, diluent or carrier;
- b) a therapeutically effective amount of at least one estrogen or prodrug thereof, said estrogen being selected from the group consisting of 17 $\beta$ -estradiol, 17 $\beta$ -estradiol esters, estriol, estriol esters, estrone, estrone esters, conjugated estrogen, equilin, equilin esters, 17 $\alpha$ -ethynylestradiol, 17 $\alpha$ -ethynylestradiol esters, mestranol, mestranol esters, chemestrogen, ~~DES~~ diethylstilbestrol, phyttestrogen, tibolone, 2'-ethylestrogenoxazole, and ethynediol; and
- c) a therapeutically effective amount of at least one selective estrogen receptor modulator or prodrug thereof, wherein the selective estrogen receptor modulator has the following formula:



wherein R<sub>1</sub> and R<sub>2</sub> are independently hydrogen, hydroxyl or a moiety which is converted to hydroxyl in vivo;

wherein Z is either absent or selected from the group consisting of -CH<sub>2</sub>-, -O-, -S- and -NR<sub>3</sub>- (R<sub>3</sub> being hydrogen or lower alkyl);

wherein the R<sub>100</sub> is a bivalent moiety which distances L from the ring carbon to which R<sub>100</sub> is attached by 4-10 intervening atoms;

wherein L is a bivalent or trivalent moiety selected from the group of -SO-, -CON-, -N<, and -SON<;

wherein G<sub>1</sub> is selected from the group consisting of hydrogen, a C<sub>1</sub> to C<sub>5</sub> hydrocarbon, a bivalent moiety which in combination with G<sub>2</sub> and L is a 5-to 7- membered heterocyclic ring, and halo or unsaturated derivatives of the foregoing;

wherein G<sub>2</sub> is either absent or selected from the group consisting of hydrogen, a C<sub>1</sub> to C<sub>5</sub> hydrocarbon, a bivalent moiety which in combination with G<sub>1</sub> and L is a 5-to 7- membered heterocyclic ring, and halo or unsaturated derivatives of the foregoing;

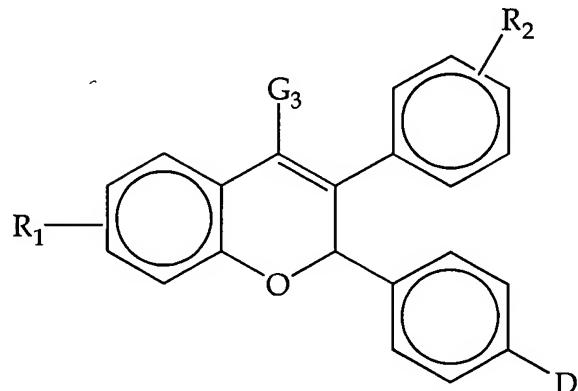
wherein G<sub>3</sub> is selected from the group consisting of hydrogen, methyl and ethyl.

Claim 2 (Previously presented) The pharmaceutical composition of claim 1, further comprising:

a therapeutically effective amount of at least one additional agent selected from the group consisting of bisphosphonate, progestogen, an androgenic agent, testosterone, dehydroepiandrosterone, dehydroepiandrosterone-sulfate, androst-5-ene-3 $\beta$ ,17 $\beta$ -diol, 4-androstene-3,17-dione, and a prodrug of any of the foregoing additional agents.

Claims 3-12 (Canceled)

Claim 13 (Previously presented) The pharmaceutical composition of claim 1, wherein the compound is a benzopyran of the following general structure:

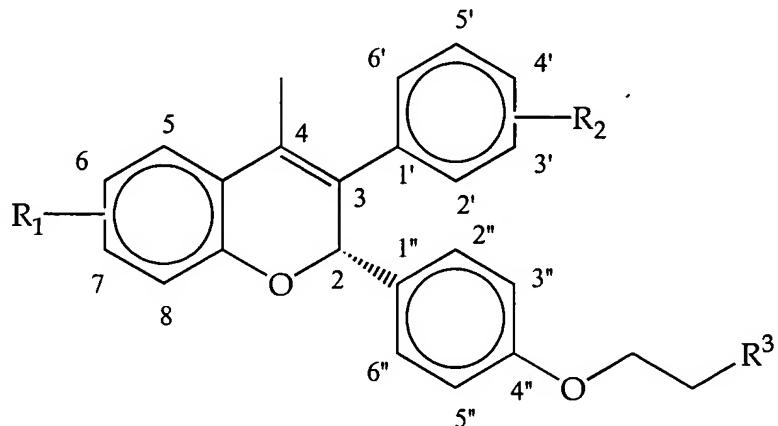


or a pharmaceutically acceptable salt thereof,

wherein D is  $-\text{OCH}_2\text{CH}_2\text{N}(\text{R}_3)\text{R}_4$  ( $\text{R}_3$  and  $\text{R}_4$  either being independently selected from the group consisting of  $\text{C}_1\text{-C}_4$  alkyl, or  $\text{R}_3$ ,  $\text{R}_4$  and the nitrogen atom to which they are bound, together being a ring structure selected from the group consisting of pyrrolidino, dimethyl-1-pyrrolidino, methyl-1-pyrrolidinyl, piperidino, hexamethyleneimino, morpholino);

wherein  $\text{R}_1$  and  $\text{R}_2$  are independently selected from the group consisting of : hydrogen, hydroxyl, and a moiety converted in vivo in hydroxyl.

Claim 14 (Previously presented) The pharmaceutical composition of claim 13, wherein the benzopyran derivative is optically active due to a majority of its stereoisomer having an absolute configuration S on carbon 2, said compound having the molecular structure:



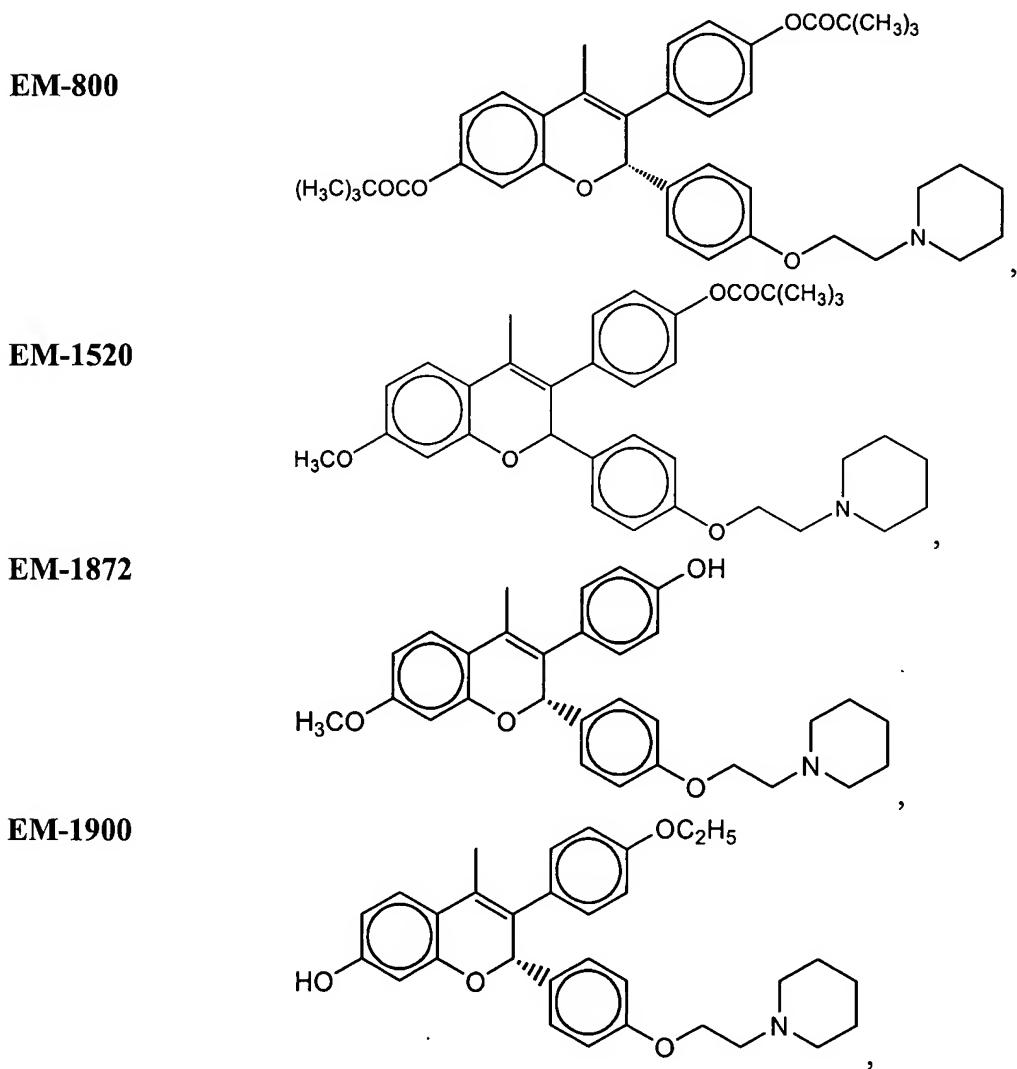
wherein  $\text{R}_1$  and  $\text{R}_2$  are independently selected from the group consisting of hydroxyl and a moiety convertible in vivo to hydroxyl;

wherein  $\text{R}^3$  is a species selected from the group consisting of saturated, unsaturated or substituted pyrrolidinyl, saturated, unsaturated or substituted piperidino, saturated, unsaturated or substituted piperidinyl, saturated, unsaturated or substituted morpholino, nitrogen-containing cyclic moiety, nitrogen-containing polycyclic moiety, and  $\text{NRaRb}$  ( $\text{Ra}$  and  $\text{Rb}$  being independently

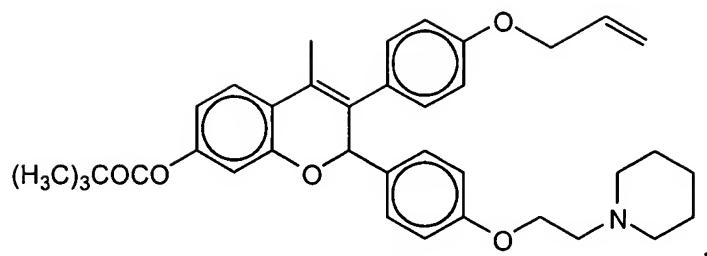
hydrogen, straight or branched C<sub>1</sub>-C<sub>6</sub> alkyl, straight or branched C<sub>2</sub>-C<sub>6</sub> alkenyl, and straight or branched C<sub>2</sub>-C<sub>6</sub> alkynyl).

Claim 15 (Previously presented) The pharmaceutical composition of claim 14, wherein said compound or salt substantially lacks (2R)-enantiomer.

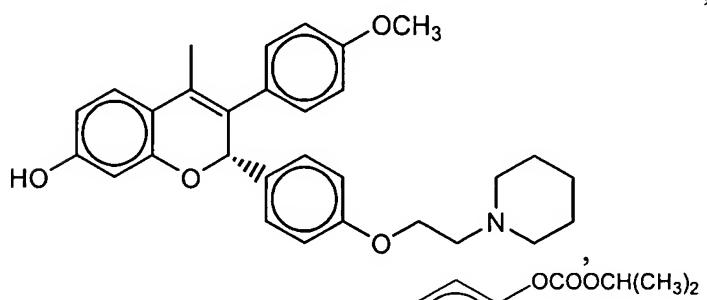
Claim 16 (Previously presented) The pharmaceutical composition of claim 14, wherein said selective estrogen receptor modulator is selected from the group consisting of:



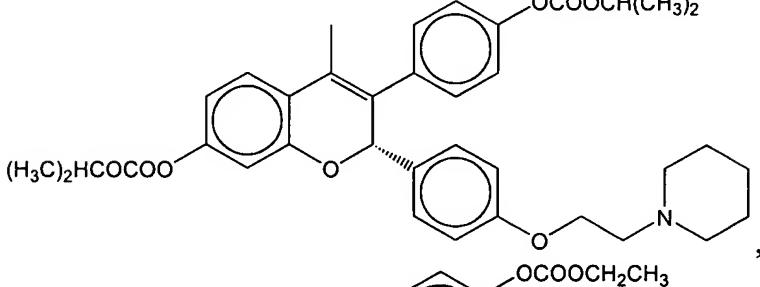
**EM-1901**



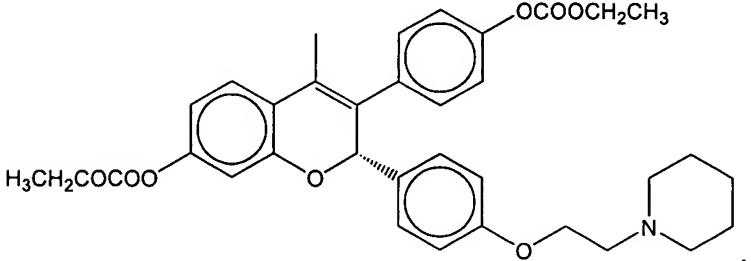
**EM-1903**



**EM-1533**



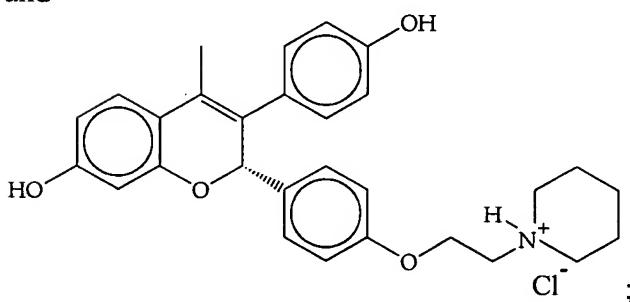
**EM-1518**



and

**EM-652.HCl**

**(EM-1538)**



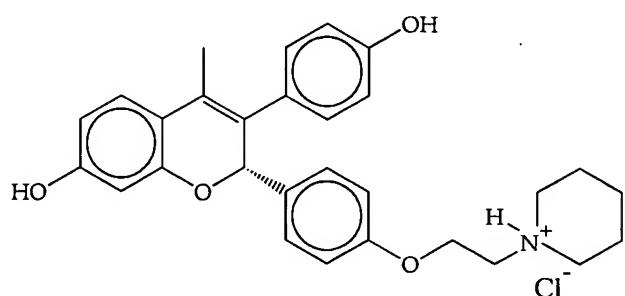
wherein all of the foregoing molecular structures whose stereochemistry is indicated are optically active due to a majority of their stereoisomers being of 2S configuration.

Claim 17 (Previously presented) The pharmaceutical composition of claim 14, wherein the benzopyran derivative is a salt of an acid selected from the group consisting of acetic acid, adipic acid, benzenesulfonic acid, benzoic acid, camphorsulfonic acid, citric acid, fumaric acid, hydroiodic acid, hydrobromic acid, hydrochloric acid, hydrochlorothiazide acid, hydroxy-naphthoic acid, lactic acid, maleic acid, methanesulfonic acid, methylsulfuric acid, 1,5-naphthalenedisulfonic acid, nitric acid, palmitic acid, pivalic acid, phosphoric acid, propionic acid, succinic acid, sulfuric acid, tartaric acid, terephthalic acid, p-toluenesulfonic acid, and valeric acid.

Claim 18 (Previously presented) The pharmaceutical composition of claim 17, wherein the acid is hydrochloric acid.

Claim 19 (Previously presented) The pharmaceutical composition of claim 1, wherein said selective estrogen receptor modulator is:

**EM-652.HCl  
(EM-1538)**

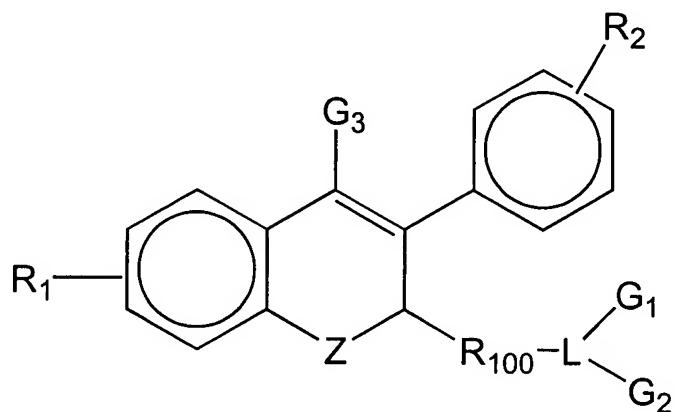


and is optically active due to a majority of its stereoisomers being of 2S configuration; and

wherein the estrogen is selected from the group consisting of 17 $\beta$ -estradiol, 17 $\beta$ -estradiol esters, 17 $\alpha$ -estradiol, 17 $\alpha$ -estradiol esters, estriol, estriol esters, estrone, estrone esters, conjugated estrogen, equilin, equilin esters, 17 $\alpha$ -ethynylestradiol, 17 $\alpha$ -ethynylestradiol esters, mestranol, and mestranol esters.

Claims 20-21 (Canceled)

Claim 22 (Currently Amended) A kit comprising a first container containing a pharmaceutical formulation comprising a therapeutically effective amount of at least one estrogen or a prodrug thereof said estrogen being selected from the group consisting of 17 $\beta$ -estradiol, 17 $\beta$ -estradiol esters, estriol, estriol esters, estrone, estrone esters, conjugated estrogen, equilin, equilin esters, 17 $\alpha$ -ethynylestradiol, 17 $\alpha$ -ethynylestradiol esters, mestranol, mestranol esters, chemestrogen, DES diethylstilbestrol, phytestrogen, tibolone, 2'-ethylestrogenoxazole, and ethynediol; and said kit further comprising a second container containing a pharmaceutical formulation comprising a therapeutically effective amount of at least one selective estrogen receptor modulator or prodrug thereof, wherein the selective estrogen receptor modulator has the following formula:



wherein  $R_1$  and  $R_2$  are independently hydrogen, hydroxyl or a moiety which is converted to hydroxyl in vivo;

wherein  $Z$  is either absent or selected from the group consisting of  $-\text{CH}_2-$ ,  $-\text{O}-$ ,  $-\text{S}-$  and  $-\text{NR}_3-$  ( $R_3$  being hydrogen or lower alkyl);

wherein the  $R_{100}$  is a bivalent moiety which distances  $L$  from the ring carbon to which  $R_{100}$  is attached by 4-10 intervening atoms;

wherein  $L$  is a bivalent or trivalent moiety selected from the group of  $-\text{SO}-$ ,  $-\text{CON}-$ ,  $-\text{N}^<$ , and  $-\text{SON}^<$ ;

wherein  $G_1$  is selected from the group consisting of hydrogen, a  $C_1$  to  $C_5$  hydrocarbon, a bivalent moiety which in combination with  $G_2$  and L is a 5-to 7- membered heterocyclic ring, and halo or unsaturated derivatives of the foregoing;

wherein  $G_2$  is either absent or selected from the group consisting of hydrogen, a  $C_1$  to  $C_5$  hydrocarbon, a bivalent moiety which in combination with  $G_1$  and L is a 5-to 7- membered heterocyclic ring, and halo or unsaturated derivatives of the foregoing;

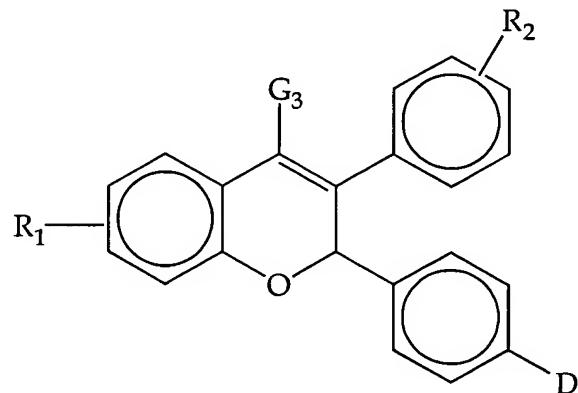
wherein  $G_3$  is selected from the group consisting of hydrogen, methyl and ethyl.

Claim 23 (Previously presented) The kit of claim 22, further comprising at least one additional container that contains a therapeutically effective amount of at least one additional agent selected from the group consisting of dehydroepiandrosterone, dehydroepiandrosterone-sulfate, androst-5-ene- $3\beta,17\beta$ -diol, an androgenic agent, testosterone, 4-androstene-3,17-dione and a prodrug of any of the foregoing additional agents.

Claim 24 (Withdrawn) The kit of claim 22 further comprising at least one additional container containing a pharmaceutical formulation comprising a therapeutically effective amount of at least one bisphosphonate.

Claims 25-34 (Canceled)

Claim 35 (Currently amended) The kit of claim 34 22, wherein the selective estrogen receptor modulator compound is a benzopyran of the following general structure:

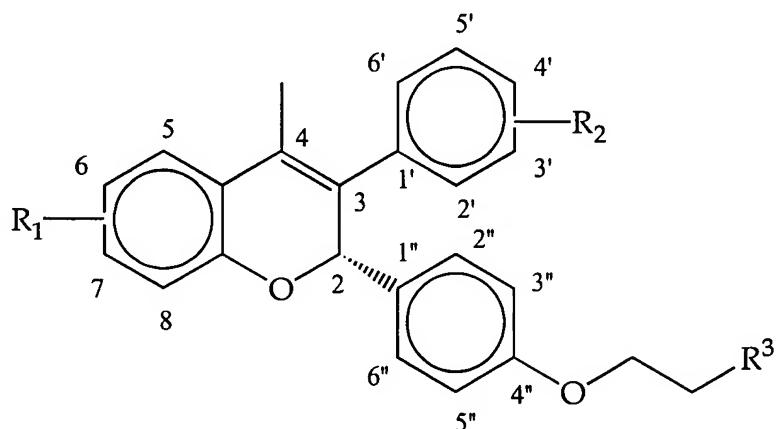


or a pharmaceutically acceptable salt thereof,

wherein D is  $-\text{OCH}_2\text{CH}_2\text{N}(\text{R}_3)\text{R}_4$  ( $\text{R}_3$  and  $\text{R}_4$  either being independently selected from the group consisting of  $\text{C}_1\text{-C}_4$  alkyl, or  $\text{R}_3, \text{R}_4$  and the nitrogen atom to which they are bound, together being a ring structure selected from the group consisting of pyrrolidino, dimethyl-1- pyrrolidino, methyl-1-pyrrolidinyl, piperidino, hexamethyleneimino and morpholino);

wherein  $\text{R}_1$  and  $\text{R}_2$  are independently selected from the group consisting of : hydrogen, hydroxyl, and a moiety converted in vivo in hydroxyl.

Claim 36 (Previously presented) The kit of claim 35, wherein the benzopyran derivative is optically active due to a majority of its stereoisomer having an absolute configuration S on carbon 2, said compound having the molecular structure:



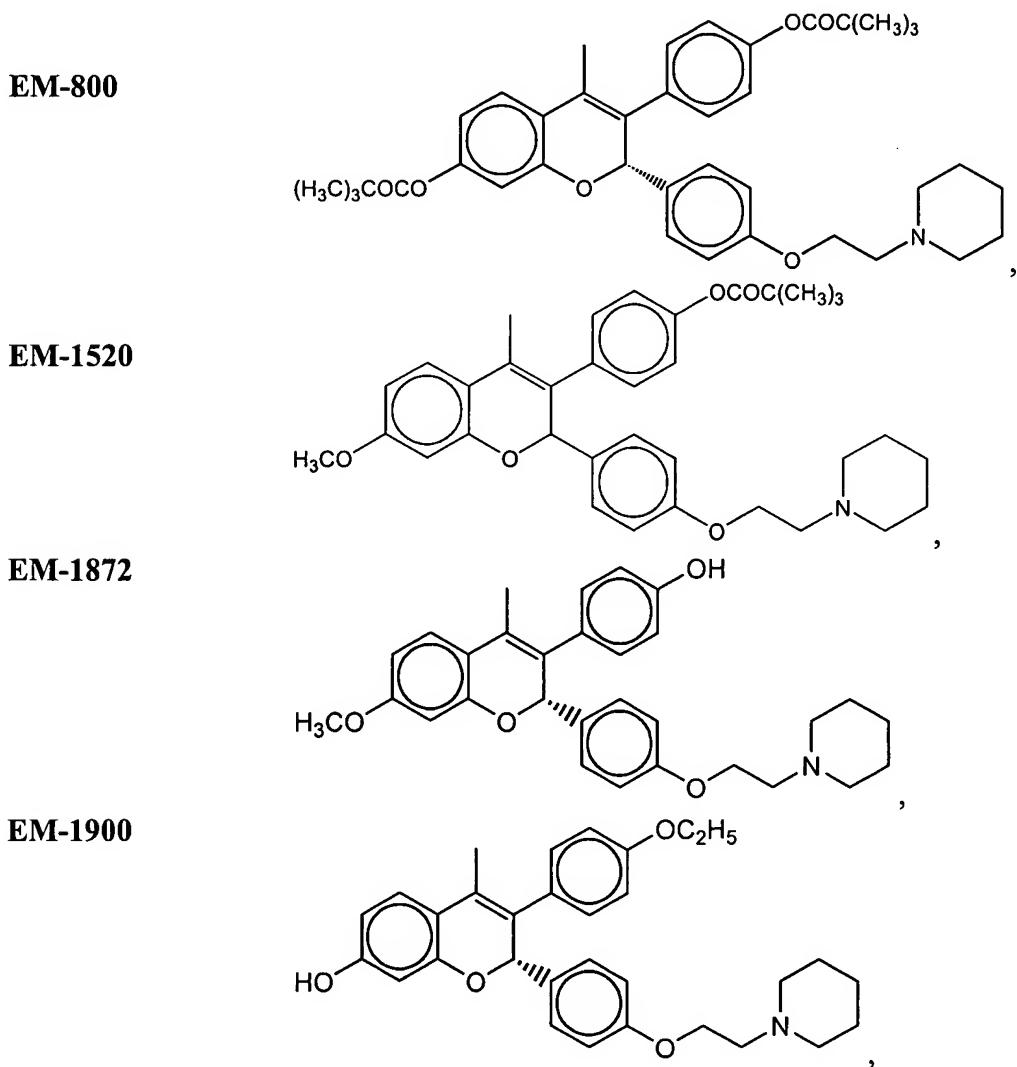
wherein  $\text{R}_1$  and  $\text{R}_2$  are independently selected from the group consisting of hydroxyl and a moiety convertible in vivo to hydroxyl;

wherein  $\text{R}^3$  is a species selected from the group consisting of saturated, unsaturated or substituted pyrrolidinyl, saturated, unsaturated or substituted piperidino, saturated, unsaturated or substituted piperidinyl, saturated, unsaturated or substituted morpholino, nitrogen-containing cyclic moiety, nitrogen-containing polycyclic moiety, and  $\text{NRaRb}$  ( $\text{Ra}$  and  $\text{Rb}$  being independently hydrogen,

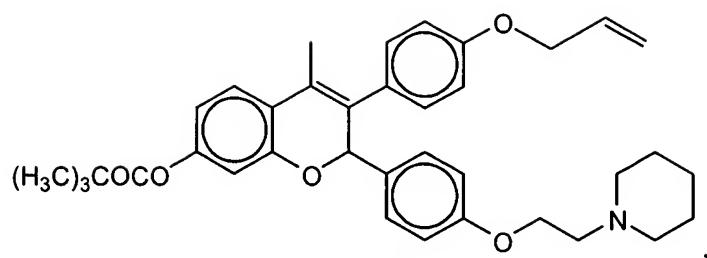
straight or branched C<sub>1</sub>-C<sub>6</sub> alkyl, straight or branched C<sub>2</sub>-C<sub>6</sub> alkenyl, and straight or branched C<sub>2</sub>-C<sub>6</sub> alkynyl).

Claim 37 (Previously presented) The kit of claim 36, wherein said compound or salt substantially lacks (2R)-enantiomer.

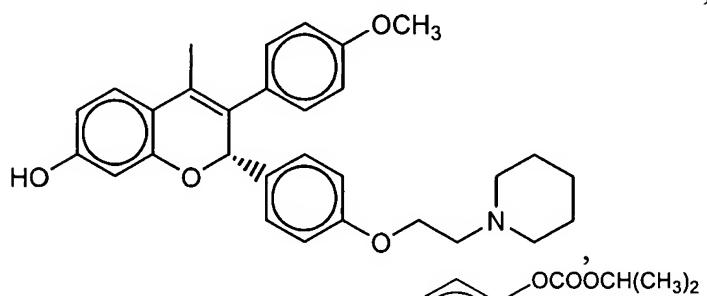
Claim 38 (Previously presented) The kit of claim 36, wherein said selective estrogen receptor modulator is selected from the group consisting of:



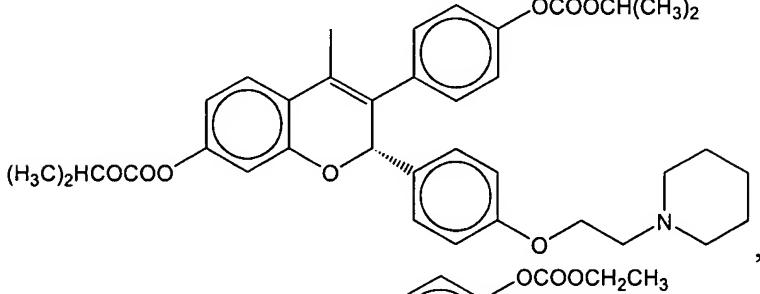
**EM-1901**



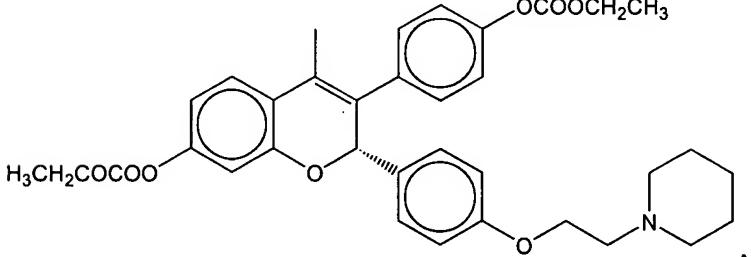
**EM-1903**



**EM-1533**



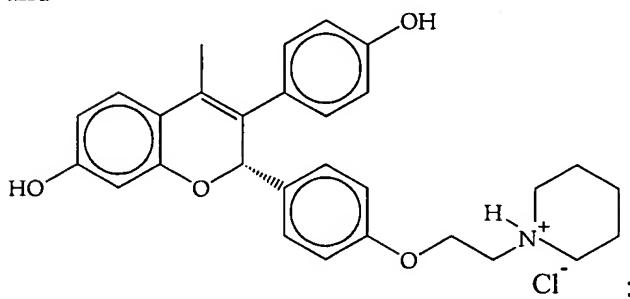
**EM-1518**



and

**EM-652.HCl**

**(EM-1538)**



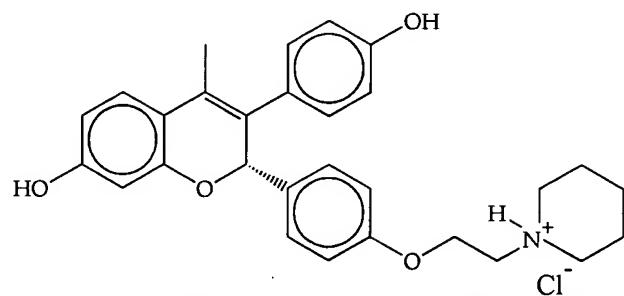
wherein all of the foregoing molecular structures whose stereochemistry is indicated are optically active due to a majority of their stereoisomers being of 2S configuration.

**Claim 39 (Previously presented)** The kit of claim 36, wherein the benzopyran derivative is a salt of an acid selected from the group consisting of acetic acid, adipic acid, benzenesulfonic acid, benzoic acid, camphorsulfonic acid, citric acid, fumaric acid, hydroiodic acid, hydrobromic acid, hydrochloric acid, hydrochlorothiazide acid, hydroxy-naphthoic acid, lactic acid, maleic acid, methanesulfonic acid, methylsulfuric acid, 1,5-naphthalenedisulfonic acid, nitric acid, palmitic acid, pivalic acid, phosphoric acid, propionic acid, succinic acid, sulfuric acid, tartaric acid, terephthalic acid, p-toluenesulfonic acid, and valeric acid.

**Claim 40 (Previously presented)** The kit of claim 39, wherein the acid is hydrochloric acid.

**Claim 41 (Previously presented)** The kit of claim 22, wherein said selective estrogen receptor modulator is:

**EM-652.HCl  
(EM-1538)**



and is optically active due to a majority of its stereoisomers being of 2S configuration; and

wherein the estrogen is selected from the group consisting of 17beta-estradiol, 17beta-estradiol esters, 17alpha-estradiol, 17alpha-estradiol esters, estriol, estriol esters, estrone, estrone esters, conjugated estrogen, equilin, equilin esters, 17alpha-ethynylestradiol, 17alpha-ethynylestradiol esters, mestranol, and mestranol esters.

**Claims 42-43 (Canceled)**

Claim 44 (Withdrawn)

The pharmaceutical composition of claim 1, further comprising a bisphosphonate.